

**WHAT IS CLAIMED IS:**

1. An apparatus for holding one or more devices, comprising:  
a rack comprising:  
one or more device, at least one device having a microcontroller;  
a device memory associated with the at least one device, the device memory containing a unique identifier; and  
a bus connecting the microcontroller and the device memory, the microcontroller being configured to retrieve the unique identifier.
2. The apparatus of claim 1, wherein the device memory comprises information about the device.
3. The apparatus of claim 1, wherein the rack further comprising a rack memory connected to the microcontroller through the bus, the rack memory containing information about the rack; and the microcontroller being configured to retrieve the information from the rack memory.
4. The apparatus of claim 1, wherein information about the rack comprises a unique identifier associated with the rack.
5. The apparatus of claim 1, wherein the device further comprises a user interface communicably linked to the microcontroller.
6. The apparatus of claim 1, wherein the microcontroller is communicably linked to a user interface.
7. The apparatus of claim 6, wherein the user interface is remote from the rack.
8. The apparatus of claim 1, wherein the bus is a one-wire bus.

9. The apparatus of claim 1, wherein the bus comprises a wire configured to indicate to the microcontroller that the bus is busy.

10. The apparatus of claim 6, wherein the microcontroller contains a device-inventory program; and a processor which, when executing the device-inventory program, performs an operation comprising:

- receiving a request command from the user interface;
- issuing a retrieve command to the device memory in response to receiving the request command, the retrieve command being configured to retrieve information about the device;
- receiving the information about the device; and
- sending the the information about the device to the user interface.

11. An apparatus for holding one or more devices, comprising:

- a rack comprising:
  - one or more device, at least one device having a microcontroller;
  - a rack memory associated with the at least one device, the rack memory containing information about the rack; and
  - a bus connecting the microcontroller and the rack memory, the microcontroller being configured to retrieve the unique identifier.

12. The apparatus of claim 11, wherein the information about the rack comprises a unique identifier associated with the rack.

13. A microcontroller, comprising:

- a memory containing a device-inventory program; and
- a processor which, when executing the device-inventory program, performs an operation comprising:
  - receiving a request command;
  - issuing a retrieve command to one or more memories connected to the microcontroller in response to receiving the request command, the retrieve

command being configured to retrieve inventory information from the one or more memories;

receiving the inventory information from the one or more memories, the inventory information containing one of information about a device and information about a rack; and

sending the inventory information to the user interface.

14. A method of programmatically taking an inventory of one or more devices, each device being mounted on a rack, comprising:

receiving a request command from a user interface communicably linked to a microcontroller;

issuing a retrieve command to one or more memories connected to the microcontroller in response to receiving the request command, the retrieve command being configured to retrieve inventory information from the one or more memories;

receiving the inventory information from the one or more memories; and

sending the inventory information to the user interface.

15. The method of claim 14, wherein the request command is configured to request the microcontroller to issue the retrieve command to the one or more memories.

16. The method of claim 14, wherein the one or more memories comprise one or more device memories, each device memory being coupled to one of the rack and a device.

17. The method of claim 16, wherein each device memory comprises the inventory information containing one of a unique identifier associated with the device and information about the device.

18. The method of claim 14, wherein the one or more memories comprise a rack memory coupled to the rack.

19. The method of claim 18, wherein the rack memory comprises the inventory information containing one of a unique identifier associated with the rack and information about the rack.

20. The method of claim 14, wherein the microcontroller is connected to one of the rack and at least one of the one or more devices.

21. The method of claim 14, wherein the retrieve command is issued by the microcontroller to the one or more memories through a bus.

22. The method of claim 14, wherein issuing the retrieve command comprises:  
determining whether a busy message exists; and  
if the bus message exists, then issuing another retrieve command to the one or more memories.

23. The method of claim 22, wherein the another retrieve command is issued after a random period of time.

24. A computer-readable medium containing a program which, when executed by a processor, performs an operation of taking an inventory of one or more devices, each device being mounted on a rack, the operation comprising:

receiving a request command from a user interface communicably linked to a microcontroller;

issuing a retrieve command to one or more memories connected to the microcontroller in response to receiving the request command, the retrieve command being configured to retrieve inventory information from the one or more memories;

receiving the inventory information from the one or more memories; and  
sending the inventory information to the user interface.

25. The computer-readable medium of claim 24, wherein the request command requests the microcontroller to issue the retrieve command to the one or more memories.

26. The computer-readable medium of claim 24, wherein the one or more memories comprise one or more device memories, each device memory being coupled to the device.

27. The computer-readable medium of claim 26, wherein the inventory information containing one of a unique identifier associated with the device and information about the device.

28. The computer-readable medium of claim 24, wherein the one or more memories comprise a rack memory coupled to the rack.

29. The computer-readable medium of claim 28, wherein the rack memory comprises the inventory information containing one of a unique identifier associated with the rack and information about the rack.